

Isamu UMEZAKI*: **Some new and noteworthy species
of genus *Punctaria* (brown algae) from Japan**

梅 崎 勇*: 日本産褐藻類ハバモドキ属の
1 新種と 2 珍種について

(Pl. VI)

From the Japanese coast are known six species of *Punctaria*, Punctariaceae, brown algae: *P. latifolia* Grev. (Okamura 1916, '36; Yamada 1928; etc.) and *P. plantaginea* (Roth) Grev. (Yendo 1909; Okamura 1927, '36; Yamada and Tanaka 1944; etc.) are common on our coasts; *P. tenuis* Yamada et Iwamoto, *P. kinoshitae* Yamada et Iwamoto are new species reported by Iwamoto in 1960 as growing in Lake Saroma, Hokkaido; and *P. flaccida* Nagai, which is dealt with in this paper, was originally reported by Nagai in 1940 from Kunashiri Island, Kuriles, and in 1944 Yamada and Tanaka found it at Akkeshi, Hokkaido, which seem to be the second new locality for the species.

The present paper deals with three species of genus *Punctaria*: *P. pilosa* is new to science; *P. chartacea* Setchell et Gardner is new to the Japanese marine flora; and *P. flaccida* Nagai is described to have unilocular sporangia on it, which is a new record for the species. The type and other specimens here examined are deposited in the Herbarium, Department of Fisheries, Faculty of Agriculture, Kyoto University, at Maizuru. The writer wishes to express his heartfelt thanks to Prof. Y. Yamada, Hokkaido University, for his revising the manuscript.

1. ***Punctaria flaccida*** Nagai, Journ. Fac. Agr., Hokkaido Imp. Univ. **46**: 56, pl. II, figs. 12, 13 & pl. III, fig. 7, 1940; Yamada and Tanaka, Sci. Pap. Inst. Algol. Res., Fac. Sci., Hokkaido Imp. Univ. **3**: 59, 1944.

The plants epiphytic, solitary or slightly gregarious, flaccid, linear-lanceolate, with blunt apices and with sharply narrowed bases, 2-7cm long, 3-12mm broad, composed of four layers of cells, 60-90 μ thick; the medullary cells slightly larger than the cortical cells. Unilocular sporangia scattered on both surfaces of plant, immersed among cortical cells, oblong or ellipsoidal in shape, 34-38 μ ×21-38 μ in size in the vertical section. Plurilocular sporangia unknown. Fig. 1 a-b.

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Japanese name: Chishima-habamodoki (nom. nov.).

Habitat and locality: Epiphytic on *Phyllospadix Scouleri* Hook. Aininkappu, Akkeshi, Hokkaido. *Umezaki 2753*, 27 July 1953.

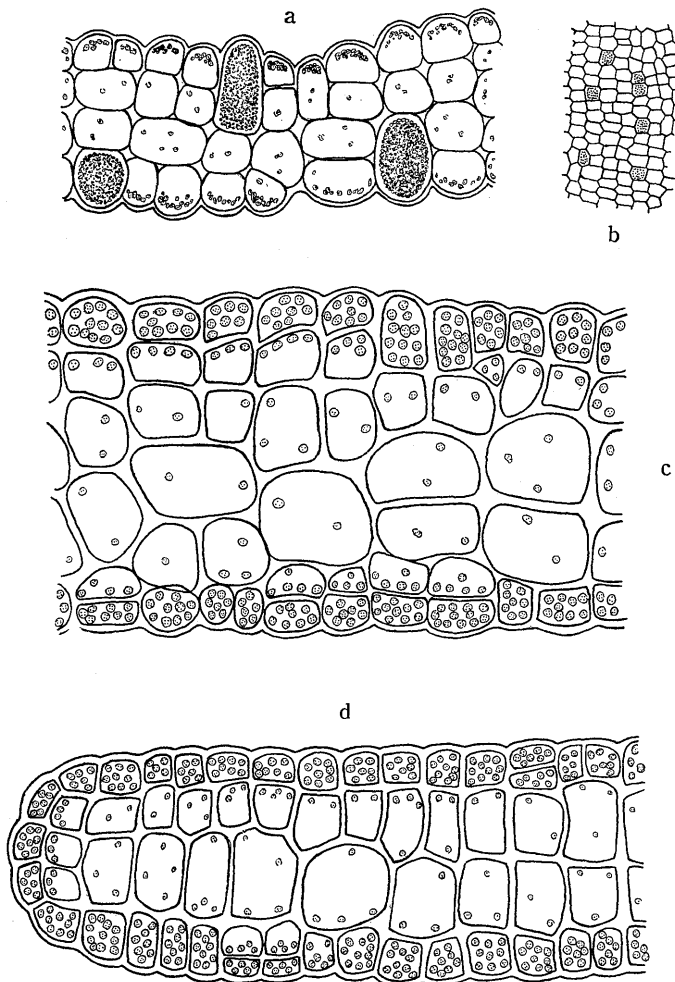


Fig. 1. a-b. *Punctaria flaccida* Nagai. a. Cross section of a plant, with unilocular sporangia. $\times 170$. b. Surface view of plant, with unilocular sporangia. $\times 50$. c-d. *Punctaria chartacea* Setchell et Gardner. c. Cross section of a plant. $\times 170$. d. Cross section of the marginal portion of a plant. $\times 170$.

Punctaria flaccida was recorded from Tomari, Kunashiri Island, southern Kuriles, as new by Nagai in 1940, when he did not find unilocular sporangia on the type plant, although discovered plurilocular sporangia. In 1940, Yamada and Tanaka found it in the vicinity of the Akkeshi Marine Biological Station, Hokkaido University, where the materials here examined were also collected by the present writer in July 1953, but they did not give any description and figure in their paper (l. c.). Fortunately, the writer's plants have many unilocular sporangia on which careful observations are made in this study. The unilocular sporangia are formed on both surfaces of the plant, usually scattered in solitary fashion, sometimes in small groups. They are immersed among the cortical cells and are larger in size than the other vegetative cells oblong or ellipsoidal in the vertical view. The present discovery of unilocular sporangia is the first record for the species. No plurilocular sporangium has been found in this collection.

2. ***Punctaria chartacea*** Setchell et Gardner, Univ. Calif. Publ. Bot. **8**: 521, pl. 45, fig. 79 & pl. 81, 1925.

The plants membranaceous, chartaceous, rigid, linear to broadly elliptical, rugged on the surfaces, the margins fimbriate, (8)-15-25cm long, (5)-8-12cm broad, attached, by a very small disk, 90-130 μ thick, composed of (5)-6-7 layers of cells; the cortical cells much smaller than the medullary cells, with dense chromatophores. Plants dark brown, the colour not changing on drying, not adhering at all to paper. Hairs, uni- and plurilocular sporangia unknown. Fig. 1 c-d.

Japanese name: Gasagasa-habamodoki (nom. nov.).

Habitat and locality: Washed ashore. Muroran, Hokkaido. Umezaki 2751, 14-15 July 1953.

A large number of specimens were found washed ashore on the coast of Muroran, Hokkaido, in the middle of July, 1953. The base of the plant is very small and acutely attenuated; therefore, it appears to be detached from its substratum, especially at the occasion of heavy waves. Setchell and Gardner (l. c.) did not observe hairs, uni- and plurilocular sporangia in their type specimens from Sitka, Alaska. The present specimens have no hairs, uni- and plurilocular sporangia either. The plant is more rigid than that of *Punctaria plantaginea* which it superficially resembles. This is a new record for the Japanese marine flora.

3. ***Punctaria pilosa*** Umezaki, spec. nov.

Planta epiphytica, gregaria rarius solitaria, linearis vel late linearis, apice obtusa basi attenuata margine non undulata, 4-7.5cm alta, 0.5-1.8cm lata, tenuis

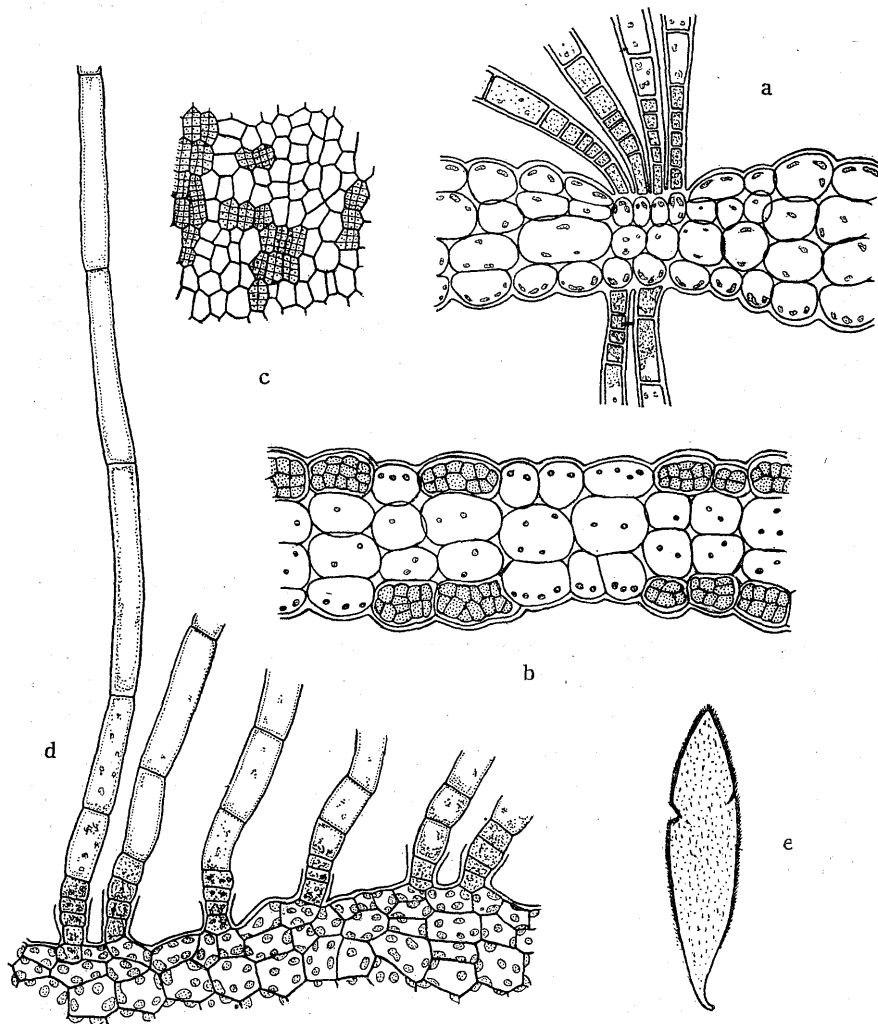


Fig. 2. *Punctaria pilosa* Umezaki. a. Cross section of a plant, with two groups of hairs. $\times 170$. b. Cross section of a plant, with plurilocular sporangia. $\times 170$. c. Surface view of a plant, with plurilocular sporangia. $\times 100$. d. Hairs on the marginal portion of a plant $\times 170$. e. A plant showing an arrangement of hairs along its marginal portion. $\times 2/3$

60–70 μ crassa, cellulis plerumque 4 rarius 3 stratis; cellulis medularibus parvis magnioribus quam corticibus, perpendiculis 15–24 μ ×16–36 μ crassis; cellulis corticalibus superficies 12–18 μ ×21–36 μ crassis, perpendiculis 12–20 μ ×12–20 μ crassis. Sporangii plurilocularibus supra utras frondium sparsis, plerumque gregariis, non aut parvis projectis. Sporangii unilocularibus ignotis. Pilis aggregatis paucis vel solitariis, margine frondium numerosis. Planta dilute fuscescens, siccate charte firme adhaeret.

The plants epiphytic on *Sargassum*, gregarious, rarely solitary, linear or broad-linear, above obtuse, attenuating in a short stipe at base, not undulate at margine, 4–7.5cm long, 0.5–1.8cm broad, thin, 60–70 μ thick, composed of usually 4, rarely 3 layers of cells; the medullary cells a little larger than the cortical ones, 15–24 μ ×16–36 μ in size in the vertical view; the cortical cells 12–18 μ ×21–36 μ in size in the surface view, 12–20 μ ×12–20 μ in size in the vertical view. Plurilocular sporangia scattered on both surface of plant, usually gregarious, not or slightly projected on the surfaces. Unilocular sporangia unknown. Hairs in small groups or solitary, numerous along the margine of plant, sparse on both surfaces of plant. Plants pale brown, adhering firmly to paper on drying. Pl. I; fig. 2.

Japanese name: Kebuka-habamodoki (nom. nov.).

Habitat and locality: Epiphytic on *Sargassum patens* C. Ag. Hon-jima, Shiaku, Seto Inland Sea. *Umezaki 2724*, 9 February 1955. (TYPE)

The new species of *Punctaria* is closely related to *P. tenuis* Yamada et Iwamoto (1960) which was found growing on *Zostera* in Lake Saroma, Hokkaido, but it can be easily distinguished from the latter alga by its smaller frond and by the internal structure, which is usually composed of four layers of cells. Moreover, the plant is not undulated at its margin. Numerous solitary hairs are issued along the margin of the plant; this is a feature peculiar for the species. (See fig. 2 d, e).

Literature cited

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Punctaria pilosa Umezaki. The type specimen. $\times 1$.

I. UMEZAKI: *Punctaria* from Japan

497-534. Yamada, Y. and T. Tanaka (1944) Sci. Pap. Inst. Algol. Res., Fac. Sci., Hokkaido Imp. Univ. **3**: 47-77, pl. 8. Yendo, K. (1909) Bot. Mag. Tokyo **23**: 117-133.

○牧野標本館雑記 (4) Kôzô HIYAMA: Miscellany from Makino Herbarium (4)

新称植物のつづき オオユキザサ: 羽後国月山産の標本上で命名。3枚あるうちの2枚がヒロハノユキザサ (*Smilacina yesoensis* Fr. & Sav.) で、他の1枚はオオバユキザサ (*S. hondoensis* Ohwi) である。以上の標本は採者も採集年も不明であるが、牧野先生の採集品であるらしい。

ヤクシマグミ: 大隅国屋久島の山頂付近 (田代善太郎, 年月不明) 産の標本上に。これは同名のヤクシマグミ (正宗巖敬, 1929 年—*Elaeagnus yakusimensis* Masam.) と同物である。

シマカンアオイ: 奄美大島古見 (1901 年 4 月 4 日, 田村慶助) 産の標本上に。これはフジノカンアオイ (*Heterotropa Fudsinoi* F. Maek.) である。

スズメギキョウ: 沖縄中頭郡越來 (1922 年 4 月, 記入はないが坂口総一郎氏の採品?) 産の標本上で。 *Lobelia liukuensis* Makino, sp. nov. と学名が併記されている。この名は坂口氏の沖縄植物総目録 8 頁 (1924 年) に載せられているが、これはタチミゾカクシ (山本由松, 1929 年—*Lobelia Hancei* Hara) と同じであるから、タチミゾカクシという和名は異名となる。

オニタネツケバナ: 下野国日光千手ヶ原 (1928 年) 産の標本上に。これはオクヤマガラシ (*Cardamine torrentis* Nakai) である。

テマリゴマギ: 磐城国三春 (1901 年 9 月 4 日, 服部保義産) の標本上で、これはヤブデマリ (*Viburnum Thunb. var. tomentosum* Miq.) そのものであった。(牧野標本館)

○イヌヤマモモソウが呉市でとれた (久内清孝) Kiyotake HISAUCHI: *Gaura parviflora* collected in Kure City as a casual.

呉市の太刀掛優氏から送られた標本を検したところ、それがイヌヤマモモソウ *Gaura parviflora* Dougl) であった。恐らく本州の野外で見つかった事実として記録するに足る新事実であろう。わが国には明治時代に渡来していて当時この和名が小石川植物園で、与えられたもので、そのときの標本が東大のおし葉庫にある。九州では故田代美太郎氏が 1915 年 6 月に鹿児島県加治木でとられ、その標本が手元にあるが、その頃はまだ和名はなかったようである。